Experiment No. 5.

Aim:- Build simple network topology & configure it for dynamic routing

Theory:- Routing Information Protocol (RIP)

RIP is dynamic routing protocol that uses hap count as routing metric to find best path between source & destination network. It is a distance vector routing protocol that has on AB value of 120 & works on the network layer of OSI model. RIP uses port Number 520.

Features of RIP-

1. Updates of network are exchanged periodically.
2. Updates are always broad cast.
3. Full routing tables are sent in updates
4. Routes always trust routing info. recieved from neighbour router. This AKA as routing rumours.

Procedure :-

1. Open Cisco Packet Tracer.
2. Drag & Drop devices - Drag & Drop two Cisco 2911 routers, Cisco 2960 switches & PC's onto workspace
3. Connect Routers - Connect two routers using Ethernet cables. You Can Gigabit Ethernet in faces for this purpose

4. **Connect Switches :-** Connect each router to Cisco 2960 switches using Ethernet Cables.

5. **Connect Pcs :-** Connect each Cisco 2960 Switch to all Pcs using Ethernet Cables.

6. **Configure IP Address :-** Configure IP add on Router interfaces connected to switches & the Pc interfaces.

R_1 - 192.168.1.1/24

R_2 - 192.168.2.1/24

R_1 - 192.168.1.2/24

P_2 - 192.168.1.3/24

P_3 - 192.168.2.2/24

7. **Enable RIP :-** It can be enable routing Protocol on both routers.

• on Router 1 - Enter global configuration mode & type, 'router rip': Then connect add network statement for connected interface - 'network 192.168.1.0. & 'network 192.168.2.0'.

• on Router 2 - Follow same steps adding network 192.168.2.0 & 192.168.1.0.

8. Test connectivity.

Conclusion :- Implemented Dynamic routing successfully.

Se0/2/0 ... Se0/1/0

Rou Gig0/0

Gig0/1

Fa0/1

Fa0/1

Fa0/4

Fa0/4

Fa0/3

Fa0/3

Fa0

Fa0

Fa0

Fa0

PC-PT
PC0

PC-PT
PC1

PC-PT
PC2

PC-PT
PC3